

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

527,724
PCT/EP2003/009919



Applicant's or agent's file reference P801588/WO/1	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009919	International filing date (day/month/year) 06 September 2003 (06.09.2003)	Priority date (day/month/year) 13 September 2002 (13.09.2002)
International Patent Classification (IPC) or national classification and IPC B25J1/00		
Applicant DAIMLERCHRYSLER AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 08 April 2004 (08.04.2004)	Date of completion of this report 29 March 2005 (29.03.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009919

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-24 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-12 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1-6 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP 03/09919

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-12	YES
	Claims		NO
Inventive step (IS)	Claims	1-7	YES
	Claims	8-12	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: DE 299 18 486 U

D2: US 5 345 675 A.

2. The present application fails to meet the requirements of PCT Article 33(1) because the subject matter of claim 8 does not involve an inventive step (PCT Article 33(3)).

2.1 In the applicant's letter of 18 January 2005, it is argued that the sensors (38, 40) according to document D2 must be metrically calibrated and that, in consequence, the subject matter of claim 8 is novel.

This point need not be resolved since, although novelty would be thus established, a person skilled in the art seeking to solve the problem of interest, namely that of achieving a cheaper configuration of the device according to document D2, would dispense with the metric calibration of the sensors, without being thereby inventive, and arrive in this way at the subject matter of claim 8.

- 2.2 Proceeding from document D1, likewise, the subject matter of claim 8 fails to involve an inventive step since, in D1 too, a costly calibration can be omitted without thereby being inventive.
- 2.3 The applicant is advised that, although a device according to the prior art may not operate with the desired precision without calibrated sensors, this is not relevant to the assessment of inventive step.
3. Furthermore, the application fails to meet the requirements of PCT Article 6 since claim 8 lacks clarity.

The patentability of a claimed device generally depends on a technical effect, which in the present instance goes beyond the mere omission of calibration since, without the device features that correspond to the method features of the characterising part of claim 1, the device cannot solve the problem of interest.

Therefore, in addition to the feature that at least one of the sensors (14, 14', 14'', 114) is not metrically calibrated, claim 8 should explicitly include those means for implementing an iterative control process that are implicitly derivable from the method steps of the characterising part of claim 8.

A version of claim 8 amended in this way would be considered to involve an inventive step.

/...

4. Claims 9-12 likewise have, *mutatis mutandis*, the defects set forth in points 2. and 3. above.
5. Novelty and inventive step are acknowledged in respect of claim 1 and dependent claims 2-5. The reasons are as follows:

Document D1 (DE 299 18 486 U) is the closest prior art.

Said document addresses the problem that accurate positioning of the machine tool relative to the workpiece requires a high-precision positioning system with calibrated sensors.

The invention solves this problem by means of an iterative control process in which an actual measurement from the sensor is generated and compared with a reference measurement generated during a set-up phase and then a Jakobi matrix is used to calculate a displacement vector from the difference of said measurements and finally the tool and sensor, in combination, are displaced by said displacement vector.

6. The uses, as defined in independent claims 6 and 7, of a method according to one of claims 1 to 5 are novel and involve an inventive step.